Cohesion, Instruction Time and Reading Performance at MUGC Summer Enrichment Program

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Cohesion, Instruction Time and Reading Performance at MUGC Summer Enrichment Program

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School Psychology

by

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Abstract
By Brenda S. Harvey

The purpose of this study was to determine if team cohesion and instructional time at the Marshall University Graduate College Summer Enrichment Program (MUGCSEP) will be correlated with the measures of reading performance of students who attended the program. Archival data, collected during the 2006 and 2007 MUGCSEP, was used for this study. After performing a Pearson Product Moment Correlation, results yielded a statistically significant correlation between cohesion and reading performance in 2006 and a mildly inverse statistically significant correlation in 2007. Instructional time in 2006 also had a statistically significant correlation with reading performance. However, in 2007 results did not indicate a statistically significant correlation. This finding suggests the possibility that team cohesion may be an important factor in the assessment of children’s reading performance.
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Cohesion, Instructional Time and Reading Performance at MUGC Summer Enrichment Program

CHAPTER I

Review of Literature

Each year graduate students from Marshall University Graduate College seeking certification in school psychology, school counseling, special education, and reading participate in a Summer Enrichment Program. These graduate students work collaboratively to instruct children in reading with the intentions of impacting their performance. Collaborative teams and mandatory 60 minute daily reading instruction are two factors that the program utilizes to increase performance. The purpose of this study is to determine the impact of these factors.

Team Cohesion

Teams are a group of people formed together to work for a common goal. Teams in education consist of people with the common goal of effectively educating students. They are valuable because they utilize strengths and specialized skills from different individuals and perform tasks that may not have been easy or possible for one person (Iverson, 2002). In order for teams to be successful they need to have a plan or “process” (Fleming & Monda-Amaya, 2001; Iverson). Team process is the way that a team works together, i.e. structure and communication, to successfully complete goals and tasks. The more the team understands and properly utilizes process, the more the team will be successful (Iverson).

A very important part of team process is group cohesion. A dictionary definition of cohering is “to stick or hold together in a mass that resists separation (Costello, et al., 1993).” Therefore, team cohesion can be defined as a group of people that “stick” together and resist separation. In order to determine group or team cohesion many researchers have developed surveys or questionnaires for participants to complete (Dorn, Papalewis, & Brown, 1995;
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Fleming & Monda-Amaya, 2001; Mullen & Copper, 1994). These surveys include questions concerning trust, respect, interpersonal attraction, commitment to task, and group pride. An important part of group cohesion is the trust a group has for its members (Iverson, 2002). Trust among team members, feeling safe in sharing ideas, and respect for each other are highly rated for team cohesion (Fleming & Monda-Amaya). Cohesion can also be composed of interpersonal attraction, commitment to the task, and group pride (Mullen & Copper, 1994). It can help a team member to be more committed to the group and the group goals (Dorn, et al.). In an integrated study by Mullen and Copper (1994), 49 studies were selected from over 200 articles, reports or theses that researched group cohesion. From these 49 studies group cohesion was operationally defined as interpersonal attraction, commitment to task, and group pride. Previous research was unable to make a definite determination of cohesion on performance-effect. A meta-analysis was performed and resulted in a finding that performance effect can be impacted by team cohesion to a small degree (Mullen & Copper). Closer inspection of the studies analyzed in this research found only groups within military, business, sports, and medicine. It does not appear that groups or teams in education have been researched in relation to the impact of cohesion. Further inspection of current research in this topic yielded similar results for this researcher. As education has changed to include students in special education within a general education classroom more teachers are being asked to teach as a team. Due to this new wave in education it is important that team cohesion as it relates to education be researched further.

Reading Performance

Reading is an essential component in the success of people in today’s society (Reutzel & Cooter, 2004). Research indicates that failure in school, substance abuse, and criminal behavior can be linked to low reading achievement (Reutzel & Cooter). There is a multitude of research
on reading and the need for America’s children to have an increase in reading performance. The No Child Left Behind Act (NCLB), signed into law by President Bush in January 2002, gives flexibility for school districts to use federal funds, but also provides accountability for schools to educate all students (United States Department of Education, Office of Elementary and Secondary Education (U.S. Dept. of Ed), 2002). An increase on emphasis in reading was also an impact of this act. In the year 2000, less than 29 percent of all fourth-grade students performed at or above the proficient level in the National Assessment of Educational Progress in reading (U.S. Dept. of Ed). In order to address this issue Title I, a federal reading program, uses its funds to target those schools with the most need. The program allows for flexible funding in order to provide additional staff, professional development, extended-time programs, and other strategies that will help improve reading achievement (U.S. Dept. of Ed). Another program designed to help students’ reading improvement is Reading First. This program helps states, school districts, and schools to ensure that all students are reading at grade level or above by the end of third grade (U.S. Dept. of Ed). It is clear from the NCLB act that reading is a concern for America’s children and improvement of reading is the goal.

There have been many researchers attempting to determine the best approach to improving reading skills in children. Some research indicates that an increase in instructional time will have an impact on reading performance (Harn, Linan-Thompson, & Roberts, 2008; Simmons, et al., 2007). Students who had fewer opportunities to engage in extended reading practice were at higher risk for low reading performance (Harlarr, Dale, & Plomin, 2007). The amount of time exposed to and engaged in reading is correlated with reading performance. Young students and at-risk readers also benefit from additional instructional time. (Harn, et al.; Simmons, et al.). At-risk kindergarten students who were given an additional 15 minutes of
highly specified instruction daily in addition to their regular classroom instruction had an improvement in reading skills (Simmons, et al.). Additionally, at-risk students who received 60 minutes of reading intervention daily for 24 weeks showed a significant increase in reading outcomes. This finding indicated that additional time impacted reading fluency (Harn, et al.). In order to measure reading performance and determine instructional needs, students are often given curriculum based assessments.

*Curriculum Based Assessment*

In order to determine the instructional needs of a student to increase reading instruction and resulting achievement, the student’s current skill level needs to be assessed (Gravios & Gickling, 2002). Curriculum Based Assessments (CBA) are used to measure those skill levels as they pertain to the curriculum. They are also used to monitor progress and assist in the “matching” of instruction to the needs of the student (Gravios & Gickling). Gravios and Gickling (2002) describe an instructional match as, “the interplay between a student’s existing prior knowledge, the student’s capacity for information processing, and the demands presented by the learning task.” Two CBAs that are researched based and proven to be reliable and valid include Running Records and Dynamic Indicators of Basic Early Literacy Skills (DIBELS).

A Running Record is an informal reading assessment that is used for analyzing oral reading errors (Reutzel & Cooter, 2004). It records a student’s reading behavior while reading from a book and informs teachers of a student’s decoding development (Reutzel & Cooter). The implementation of this assessment has a short administration time and is easy to learn. Teachers are instructed regarding the symbols used to determine a student’s errors. For instance a check mark indicates that a word is correct and a dash indicates a word is omitted (Reutzel & Cooter). There are many forms of running records but the basic idea is the same. The student reads a
passage determined appropriate by the teacher according to the students reading level and the teacher records errors. The number of words read correctly determines the level the student is able to read, 95-100% is Independent Level, 90-94% is Instructional Level, 80-89% is Frustration Level (Reutzel & Cooter). The data derived from the assessment can be used to develop an instructional plan for the student to improve reading performance.

DIBELS is a CBA that helps to identify students at risk for reading problems. The data derived from DIBELS can assist in the development of interventions for the student. The primary uses of DIBELS are to identify children in need of intervention and evaluate the effectiveness of intervention strategies. For prevention purposes, DIBELS can be used to measure growth on reading skills on an ongoing basis, predict outcomes on high-stakes tests, and provide instructional goals (Good, Gruba, & Kaminski, 2002). DIBELS was developed to be used often as a measure of growth; therefore multiple forms have been created that are brief, economical, and easy to administer (Good, et al.).

Marshall University Graduate College Summer Enrichment Program

The Marshall University Graduate College Summer Enrichment Program (MUGCSEP) is a lab school designed for practicum experience for graduate students seeking certification or licensure in school psychology, school counseling, special education and reading. Graduate students from each discipline are assigned by program directors to a multidisciplinary team. These teams are first introduced during a three-hour orientation about four weeks prior to the start of the Summer Enrichment Program. During orientation, teams are provided an overview of the program as well as participate in team building exercises. Team collaboration is central to the program’s philosophy. Training in team building, collaboration, and diagnostic teaching of reading occurs in the first week of the program. The students arrive the second week. The
program schedule is Monday through Thursday from 7:30 AM to 1:30 PM for a total of six weeks (Krieg, Meikamp, O’Keefe, & Stroebel, 2006).

Each team is assigned a classroom of students that are multi-age, multi-ability with a full inclusion of students with special needs. The curriculum is literacy based and instruction is hands-on learning. The teams develop the classroom management plan and instructional activities. There is a 60 minute uninterrupted reading block each day. Students’ instructional needs are assessed often with CBAs and the instructional activities are planned according to those needs. Each team is responsible for developing a portfolio of their work to include assessment data, lesson plans, evaluation of the students’ progress and program success. Therefore, it is imperative that these teams work collaboratively to reach their goals. (Krieg, et al., 2006).

During the five weeks of instruction at the MUGCSEP students are assessed for literacy development and instructional needs. The data from those assessments are used to determine growth and reading performance. In 2005 students were assessed using Running Records. The analysis of that data resulted in one level of reading improvement in students from pre-kindergarten to second grades and sixth through ninth grades. Students in third through fifth grades improved two levels. The difference in the levels of achievement between the two groups was not considered significant (Cottle-Willard, 2006). In 2007 students’ reading improvement was assessed using DIBELS. The study found that students’ retell fluency, which measure comprehension of the reading passage, increased by the end of the program. This increase in reading comprehension indicates that the MUGCSEP is beneficial to students’ reading performance (Varian, 2008).
Purpose of this Study

The MUGCSEP uses multi-disciplinary teams to provide instruction to students. The purpose of this study is to evaluate the MUGC Summer Enrichment Program’s use of team teaching to determine if the cohesiveness of teams and instructional time will correlate with reading performance.

Hypotheses

1. Higher team cohesion will correlate with a higher measure of reading performance.
2. More instruction time will correlate with a higher measure of reading performance.
CHAPTER II

Method

Subjects

The subjects of this study include 41 graduate students in 2006 and 41 graduate students in 2007, both male and female, that attended MUGC and participated in the MUGC Summer Enrichment Program. These graduate students are seeking certification in one of four areas: School Counseling, School Psychology, Special Education, or Reading.

Also included in this study are students, both male and female, who attended the MUGC Summer Enrichment Program in 2006 or 2007. Participation in this program was voluntary, yet some students were enrolled to avoid retention for the upcoming school year. Many students attend because they are struggling academically during the school year. In 2006, 62 students in grades ranging from 1st through 6th with complete data sets were chosen for this study. In 2007, 29 students in grades ranging from 1st through 7th were chosen. There were a smaller number of participants in 2007 because only students with complete DIBELS data sets were included.

Instruments

The instruments utilized in this study are Running Records in 2006, DIBELS in 2007 and a likert scaled thermometer reading from both years. As previously mentioned, running records are informal assessment tools used by teachers to help determine a student’s instructional needs. It has high reliability at .90 (Reutzel & Cooter, 2004). Teachers assess students by listening to them read a passage from a leveled reader and recording the number of errors the student makes. A percentage of words read correctly is calculated to determine at what level the student was able to read the passage and where to begin instruction for that student, 95-100% is Independent Level, 90-94% is Instructional Level, 80-89% is Frustration Level (Reutzel & Cooter).
DIBELS is a curriculum based assessment used to help teachers develop instruction for students. The reliability ranges from .90-.98. DIBELS has different subtests depending on grade level and need of students. The Oral Reading Fluency (ORF) and Retell Fluency (RTF) subtests were used for the purposes of this study. They are both intended for students from the middle of 1st grade through 6th grade. The ORF uses a grade level reading probe that students are asked to read for one minute and the administrator records words omitted, substituted or hesitations more than three seconds as errors. After reading the passage the student is asked to retell what they read for purposes of the RTF. The number of words used to correctly retell the story is recorded. The purpose of the RTF is to determine how much the student comprehended of the story they read. A score is calculated and used to determine instructional need. If a student meets the appropriate grade level score they are considered to be at benchmark and their instructional needs are being met. Students whose scores are considered to be emerging are at the strategic level and may need additional intervention. Students whose scores are considered to be a deficit are in the intensive level and need substantial intervention (Good, Kaminski, & Dill, 2002). It is likely that the administrator of the assessment used in this study was a school psychology graduate student and not a member of the team teaching the student.

In addition to Running Records and DIBELS a weekly anonymous survey was given to the graduate students (see appendix). This was developed by MUGCSEP for use in the program. For this survey students were asked to use a likert rating from 1 to 10 (1 being the lowest) of how they felt their team did during that week. The only identifying information on the survey was the team number where the student belonged.
Procedure

This study is a program evaluation of MUGCSEP in 2006 and 2007. Archival data was reviewed to assess the impact of instructional time and team cohesion on reading performance. Data were collected during 2006 and 2007 by graduate students, some participating in the MUGCSEP, and others who were recruited by the school psychology department. During the Summer Enrichment Program students were given a curriculum based assessment, either Running Record in 2006 or DIBELS in 2007, to determine instructional need. A member of the team in which the student belongs administered running record assessments. A non-team member, typically unknown to the student, administered DIBELS. Then, during the five weeks of the program students received a minimum of 60 minutes of reading instruction daily. The instruction was provided by a multi-disciplinary team of MUGC graduate students working on certification in reading, special education, school counseling, or school psychology. Each week the team members were asked to rate how well they felt their team was doing during that week. During the last week of the program students were assessed again using the same instrument to measure reading performance. The end of program data was used for the measure of reading performance in this study because that is when team cohesion should have the most impact.

The Running Record data collected in 2006 was derived from Teams 2 through 4 and 6. Students in Team 1 were in Kindergarten and did not have enough reading ability to participate in Running Record assessments. The data for Team 5 was missing. For purposes of this study it was determined that Team 7’s students were too old to include in the analysis. For these reasons, Teams 1, 5, and 7 are left out of this study. In order to analyze the reading performance using the Running Record data, each book level was deemed one point. For example: if a student was assessed using a K level book their performance level was an 11.
Using the DIBELS data collected in 2007 it was determined that Teams 3 through 7 would participate in this study. Teams 1 and 2 were Preschool and Kindergarten level students and were too young for the Retell Reading Fluency part of the assessment used in this study. Team 8 students were grades 7 and above; therefore they could not be included since DIBELS assessment only evaluates students through grade 6.

During the 6 weeks of the Summer Enrichment Program each member of the team rated how they felt their team was doing using a likert scale with 1 being the lowest to 10 being the highest. The cohesion scores from Week 1 (prior to student arrival) and Week 2 (1st week students were present) were added and the standard deviation was calculated for each team to determine variance. The higher the variance of the team the less the team was cohesive. The standard deviation was used because it included the individual differences among team members as well as the group score as a whole.
CHAPTER III

Results

A Pearson Product Moment Correlation Coefficient was used to analyze the data. Results of this study indicate that in 2006 there was a statistically significant correlation between cohesiveness and reading scores as assessed by the Running Records ($r = -.723, p<.05$). This finding indicates that the teams with higher cohesion also had higher measure in reading performance. In 2007 there was a mildly statistically significant inverse correlation between cohesiveness and reading performance as assessed by DIBELS ($r = .404, p<.05$). This result indicates that the teams with higher cohesion had a lower measure in reading performance.

Results also indicated a statistically significant correlation between the amount of instruction time and reading scores as assessed by Running Records ($r = .508, p<.05$) in 2006. This means that the more instruction time the student had the higher the measure of reading performance. However, in 2007 there was not a statistically significant correlation between instructional time and reading performance as assessed by DIBELS ($r = .321, p>.05$). The lack of a significant correlation indicates that instructional time did not have a relationship with the measure of reading performance in 2007.
CHAPTER IV

Discussion

Team cohesion is an important factor in the process of teams. A review of the literature in the area of team cohesion using studies from military, business, medicine, and sports indicated that cohesion can have an effect on task performance (Mullen & Copper, 1994). Studies in the field of education which assess the team effect are needed. The MUGCSEP utilizes teams in a collaborative manner to instruct students in reading. It is the purpose of this study to determine if the cohesiveness of a team correlates with the reading performance of the students. It was hypothesized that higher team cohesion would correlate with a higher measure of reading performance. The 2006 Running Record results yielded a statistically significant correlation between cohesion and reading performance. This result indicates that a team with higher cohesion also has a higher measure of reading performance, supporting the hypothesis. The results of these correlations are consistent with the research that indicates team cohesion can impact task performance (Mullen & Copper, 1994). A mildly statistically significant inverse correlation resulted from the 2007 DIBELS data. An inverse correlation was unexpected based on the research and seems at first to suggest that team cohesion is not an important factor. Closer analysis of the procedures of administration indicated that team members evaluated the students in 2006 using Running Record while in 2007, graduate students from School Psychology who were not in the MUGCSEP did the majority of the evaluations. This suggests that the administration of the assessment by a non-team member, removing the effect of team cohesion and student/teacher relationship may be a factor in reading performance. Another variable to consider is the small subject size in 2007. This may also be a factor in the result of mild significance. Future studies with larger sample sizes are needed.
Another purpose of this study is to determine if instructional time correlates with reading performance. Studies indicate that the more time students spend on reading the higher their reading performance (Harn, et al., 2008; Simmons, et al., 2007). It was hypothesized that more instructional time would correlate with a higher measure of reading performance. Results in 2006 yielded a statistically significant correlation between instructional time and reading performance, supporting previous research studies. This result also supports the hypothesis. However, results in 2007 were not significant. This is also an unexpected result as research indicates a positive correlation. Again, this lack of significance could be due to the small sample size used in this study or use of a different measure to assess reading performance. Additional research in this area will help to explain the contradictory findings.

Limitations

There are many limitations to this study. Students are voluntary and are not randomly selected from the general population. Many possess academic or behavioral difficulties. Some students attend to avoid retention. The utilization of archived data increases the opportunity for missing information and limits the amount of available data. It also inherently relies on others’ expertise in the collection of the data. This lessons the control of administration as many students are involved in data collection. The ability to generalize the findings of this study to the general population is limited because the data utilized is mainly students who struggle academically in a limited geographical area. A broader population needs to be evaluated to correct this limitation.

Recommendations

Based on the inverse correlation results of statistical significance between team cohesion and reading performance in 2007, it is recommended that further study of team cohesion at
MUGCSEP attempts to determine administrator impact on the results. One implication of this study could be the need to look at who should administer Curriculum Based Assessments. Should a teacher administer CBAs or are hired professionals appropriate? If students perform better with teacher implementation, does having a hired professional administer the CBA decrease the reliability of their score? In order to answer these questions a study needs to be completed. To perform this study the curriculum based assessment, such as running records, would need to be administered by someone unrelated to the student’s team. Correlating team cohesion with reading performance under these circumstances could provide information about the impact of teacher implementation versus an unfamiliar administrator on assessment.

The instrument used to determine team cohesion may also need to be revised. The graduate students may not have an appropriate understanding of the current form. Asking the graduate students how cohesive they believe their team is or in what stage of the teaming process they believe they are may increase understanding.

Another recommendation for further study is to have a larger sample size of the DIBELS assessment. Adding a group to the sample of the current study will increase the sample size and may result in higher significance of correlation between cohesion and reading performance.
References


Appendix

DATE

Team    ________

Please answer the following questions using a scale from 1 to 10:
Circle your response.

1 = poor    10 = excellent

1. How have you done this week?  1  2  3  4  5  6  7  8  9  10
2. How did your team do this week?  1  2  3  4  5  6  7  8  9  10